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INTRODUCTION

FORWARD

First, we would like to thank you for your purchase of this monitor This monitor is 15 inch, high resolution, color display monitor. This manual covers the use, and points of caution, when operating this monitor. Please take the time to read this manual so that you will obtain the best performance and most use from your monitor. After reading the manual, store it in a safe place for future reference.

FEATURES

15 inch high performance CRT.
-Available in 0.28 dot pitch

- Automatically scans frequencies from 31.47KHz/70Hz, 31.47KHz/87Hz, 35.5KHz/87Hz, 35KHz/66.6Hz, 35.15KHz/56Hz, 37.86KHz/72.8Hz, 37.88KHz/60.3Hz, 48.077KHz/72.18Hz, 48.363KHz/60Hz, 56.48KHz/70Hz
- Compatible with a wide variety of video standards including VGA, IBM 8514 A, XGA and Super-VGA, ULTRA-VGA
- Supports VESA flicker-free modes.
- Size and position controls are located up front for easy and accurate adjustment.
- The optional tilt and swivel stand may be attached to provide a variety of viewing angles, or not attached if limited workspace is a consideration
- Power supply operates on AC 100-240 Volt 60/50Hz for use all over the world.
- DPMS (Display power Management Signaling)
- Digital Control

GENERAL SAFETY PRECAUTIONS

- Do not place anything heavy, wet or magnetic on the Monitor or on the power cord.
- 2. Be sure to turn the Monitor off before plugging in into the socket. Hold the plug when disconnecting it from the socket.
- If the Monitor is not to be used for a long period, disconnect the power cord from the socket.
- Make sure that the power cord and connection cords are securely connected.

- 5. Install the Monitor on a stable horizontal surface
- 6. Avoid operating the Monitor in extreme heat, humidity or where it may be affected dust.
- Never cover the ventilation holes or touch them with metalic or inflammable materials.
- 8. Never drop or otherwise strongly shock the Monitor.
- If the power supply cord is not supplied with color display monitor, use the correct Listed cord set as below.

more of the following measures

FCC, DOC AND SAFETY INFORMATION

FCC INFORMATION INSTRUCTIONS TO USER

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no quarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experenced radio/TV technician for help.

INFORMATION TO USER

Changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment. If necessary, consult your dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet helpful, prepared by the Federal Communications Commission. "How to Identify and Resolve Radio/TV Interference Problems" This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock number 004-000-00345-4.

WARNING

User must use shielded signal interface cables in order to maintain product within FCC compliance.

 This monitor will be affected in some flickering by external stimulation.

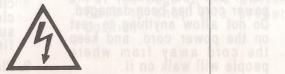
DOC COMPLIANCE NOTICE

THIS APPARATUS COMPLIES WITH THE CLASS B LIMITS FOR RADIO INTERFERENCE AS SPECIFIED IN THE CANADIAN DEPARTMENT OF COMMUNICATIONS' RADIO INTERFERENCE REGULATIONS.

CET APPAREIL EST CONFORME AUX NORMES CLASS B D'INTERFERENCE RADIO TEL OUE SPECIFIER PAR LE MINISTERE CANADIEN DES COMMUNICATIONS DANS LES REGLEMENTS D'INTERFERENCE RADIO.

WARNING AND CAUTIONS

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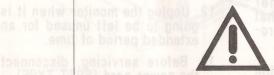


The lightning flash and arrowhead within the triangle is a warning sign alerting you of dangerous voltage" inside the product.

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER(OR BACK)NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The exclamation point within the triangle is a warning sign alerting you of important instructions accompanying the product

Never interl anything

SAFETY TIPS

- Make sure the voltage designation on your monitor correspons to local electrical supply before connecting the AC power cord to an outlet.
- 2. To avoid electric shock, nover touch the inside of the monitor. Only a qualified technician should open the monitor's case.
- 3. Never use your monitor if the power cord has been damaged. Do not allow anything to rest on the power cord, and keep the cord away from where people will walk on it.
- 4. Be sure to hold the plug, not the cord, when disconnecting the monitor from an electric socket.
- 5. Openings in the monitor cabinet are provided for ventilation. To prevent over-heating, these openings should not be bloked or covered. Also, avoid using the monitor on a bed, sofa, rug, or other soft surface, because doing so may block the ventilation openings in the bottom of the cabinet. If you put the moniotor in a bookcase or some other enclosed space, be sure that adequate ventilation is provided.
- Never insert anything metallic into the monitor openings. Doing so may create a danger of electric shock.

- 7. Put your monitor in a location with low humidity and a minimum of dust. Avoid places like damp basements or dusty hallways.
- 8. Do not expose the monitor to rain or use it near water(in kitchens, next to swimming pools, ets.). If the monitor accidentally gets wet, unplug it and contact a authorized dealer immediately. You can clean the monitor with a damp cloth when necessary, but be sure to unplug the monitor first.
- Place the monitor on a solid surface, and treat it kindly. The screen is made of glass and can be damaged if dropped or hit sharply.
- 10. If your monitor does not operate normally; in particular, if there are any unusual sounds or smells coming from it, immediately unplug it and contact a authorized dealer.
- 11. High temperatures can cause trouble. Don't try to use your monitor in direct sunlight, and keep it away from heaters, stoves, fireplaces and other sources of heat.
- 12. Unplug the monitor when it is going to be left unused for an extended period of time.
- 13. Before servicing, disconnect the power cord. (SPST TYPE)
- For pluggable equipment, the socket outlet shall be installed near the equipment and shall be easily accessible.

OPERATING GUIDE

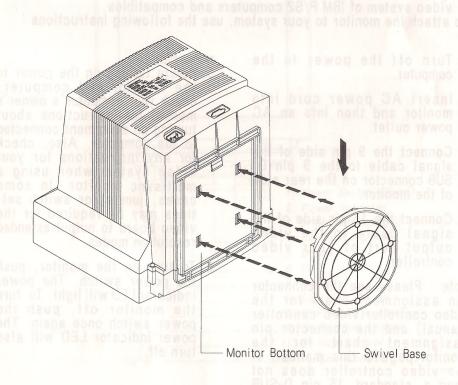
INSTALLING THE STAND

Your color monitor includes a special tilt/swivel stand you can install to adjust your viewing angle. This stand was designed specifically for this monitor and it is the only one you should use. Using any other stand may result in instability and may cause possible damage or injury.

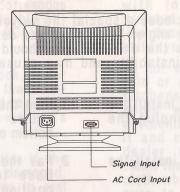
Caution: Before you install the stand, be sure to unplug the monitor's power cord.

Follow these steps to install the stand

- 1. Plug the Swivel Base into the squire holes located at the bottom of the Monitor
- 2. Pat the edge of the Swivel Base to snap into proper position This monitor can be connected to any iBM compatible analog display



CONNECTING TO YOUR COMPUTER



This monitor can be connected to any IBM compatible analog display adapter. Such adapters include VGA, 8514 A, XGA, VESA and the built-in video system of IBM P/S2 computers and compatibles. To attach the monitor to your system, use the following instructions:

- Turn off the power to the computer.
- Insert AC power cord into monitor and then into an AC power outlet.
- 3. Connect the 9 pin side of the signal cable to the 9 pin D-SUB connector on the rear side of the monitor.
- 4. Connect the 15 pin side of the signal cable to the video output port of your video controller.

Note: Please see the connector pin assignment chart for the video controller (video controller manual) and the connector pin assignment chart for the monitor (page 13 this manual) if the video controller does not have a standard 15 pin D-SUB

connector.

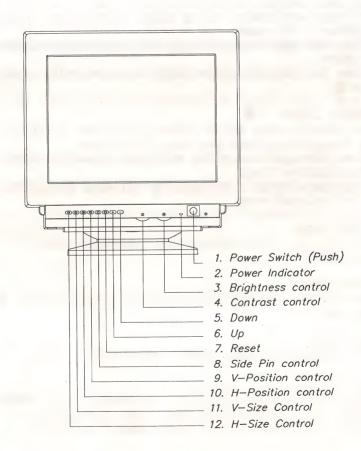
- 5. Before turning on the power to the monitor and computer, check your computer's owner's manual for instructions about turning on equipment connected to the computer. Also, check for any instructions for your video system when using a multisync monitor. In some cases, jumper or switch settings may be required for the video board to output extended resolution modes.
- 6. To turn on the monitor, push the power switch. The power indicator LED will light. To turn the monitor off, push the power switch once again. The power indicator LED will also turn off.

CONTROL LOCATION AND FUNCTIONS

BEFORE OPERATING THE MONITOR

Please take the time to familiarize yourself with the location and function of all the monitor's controls so that you can adjust it for the optimum display.

Front View



1.	Power Switch Use to turn monitor power on and off. Push switch once to turn monitor power on. LED power on indicator will also turn on. Push switch once again to turn monitor power off.
	Power Indicator(GREEN) —— - Power indicator illuminates green when the moniotr is normal act When the monitor is choose control function, LED is blinkering on green.
3.	Brightness Control The brightness control button adjusts the picture according to the brightness of the room. Turn the right side of the button to increase the brightness of the picture Turn the left side of the button to decrease the brightness of the picture.
4.	Contrast Control The contrast control button adjusts the degree of difference between the lightest and darkest sections on the screen. Turn the right side of the button to increase the contrast level of the displayed image. Turn the left side of the button to decrease the contrast level of the displayed image.
	Example Key button Press this key is decrease or move downward, move left make image like a bobbin.
6.	⊕ Key button Press this key is increase or move upward, move right, make image like a barrel.
	Reset Retrieve the factory presetting by pressing the button.
8.	Side Pin The pin control button adjusts the vertical side line straightly. —Press the — key button to make image like a bobbin. —Press the — key button to make image like a barrel.

9. V-Position The v-position control button adjusts the central position of the screen when the screen shifts. — Press the Help key button to adjusts the screen to the top. — Press the key button to adjusts the screen to the bottom.
10. H-Position The h-position control button adjusts the central position of the screen when the screen shifts — Press key button to adjusts the screen to the right. — Press key button to adjusts the screen to the left.
11. V-Size The v-size control button adjusts to give you an appropriate display height. - Press the key button to increase the vertical size for a large display. - Press the key button to decrease the vertical size for a small display.
12. H-Size The h-size control button adjusts to give you an appropriate display width. - Press the tey button to increase the horizontal size for a wide display. - Press the key button to decrease the horizontal size for a narrow display.

ADJUSTMENT EXAMPLES

Adjustment shown below is required when signals other than the recommended signal are received.
When the control is over, after 2 second control state is stored.

Condition Adjustment		Condition	Adjustment	
Picture too wide	Adjust H-Size Picture too narrow		Adjust H-Size	
	Press the key to decrease size		Press the	
Picture too large vertically	Adjust V-Size	Picture too small vertically	Adjust V-Size	
	Press the key to decrease size		Press the ⊕ key to increase size	
Picture shifted to the right	Adjust H-Position	Picture shifted to the	Adjust H-Position	
Tigit!	Press the ⊆ key to move image leftward		Press the ⊕ key to move image rightward	
Picture shifted upward	Adjust V-position	Picture shifted	Adjust V-Position	
	Press the key to move image downward		Press the ⊕ key to move image upward	
Vertical sides are not straight. Bowing out	Adjust Side Pin	Vertical sides are not straight. Bowing in	Adjust Side Pin	
Straight. Bowing out	Press the key to make image like a bobbin		Press the ⊞ key to make image like a barrel	

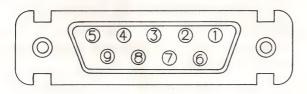
SIGNAL CONNECTIONS AND PIN ASSIGNMENTS

D-SUB CONNECTOR

The 9 pin D-SUB connector can be used with the supplied 9-15 pin cable. The 15 pin side connects to any IBM compatible VGA video port, the 9 pin side to the monitor's connector.

D-SUB Signal Input(Female Type: Figure)

PIN ASSIGNMENT	SIGNALS
1	RED
2	GREEN
3	BLUE
4	H-SYNC
5	V-SYNC
6	GND-R
7	GND-G
8	GND-B
9	GND-SYNC



Figure

TROUBLE SHOOTING

Before calling an authorized service center, please check this trouble shooting chart. Many of the problems that can occur are easily corrected without the need of a technician.

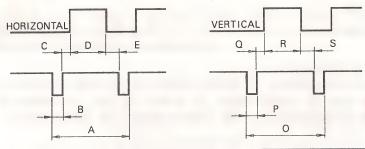
	The state of the s	
TROUBLE CONDITION	POSSIBLE CAUSE	CORRECTIVE MEASURE
Image is not displayed	Is the power cord connected? Is the power switch ON? Is the signal cable properly connected? Is the Brightness or Contrast adjustment knob turned all the to one side?	Connect the power cord. Turn on the power switch. Connect the signal cable correctly. Adjust the Brightness and Contrast to the middle position of their range.
Color of image on screen is abonormal	Is there a magnetized item near? Is the pin arrangement of the signal connector correct? Is the signal cable connected properly?	Move the magnetized item away. Use a signal connector which matches the pin arrangement. Connect the signal cable correctly.
Picture is unstable (The displayed image is tearing or rolling)	Are there signals, which are outside of the required frequency range? Is the pin arrangement of the signal connector correct? Is the signal cable correctly connected?	Input signals which are within the frequency range of the monitor. Use the signal connector which matches the pin arrangement. Connect the signal cable correctly.
The displayed image is too small or shifted, and the controls can't adjust properly.	Are there signals, which are outside of the required frequency range?	Input signals which are within the frequency range of the monitor.
Image is too dark	Is video input signal level the same as video output signal level from computer?	Check brightness and contrast that they are not at minimum

SPECIFICATIONS

• CRT Size 15inch
• Deflection 90°
• CRT Screen ····· Non-Glare, Static Electricity
Prevention, (FST) FLAT SQUARE CDT
Scanning Frequency:
31.47KHz/70Hz, 31.47KHz/60Hz, 35.5KHz/87Hz, 35KHz/66.6Hz, 35.15KHz/56Hz, 37.86KHz/72.8Hz, 37.88KHz/60.3Hz, 48.07KHz/72.18Hz, 48.363KHz/60Hz, 56.48KHz/70Hz
· Display Colors
Analog Input
Maximum Resolution(Non-Interlaced Mode)
Horizontal 1024Dots
Vertical 768Lines
• SCREEN SIZE
VERTICAL 195mm±3mm HORIZONTAL 260mm±3mm
• DIGITAL CONTROL
• Input Signal
Video Signal ············ Analog(0.7Vp-p), Positive
Separate Sync TTL level Positive or Negative
Video Band Width(Pixel Time) Max. 75MHz
• Power Supply ······ AC100-240 Volt60/50Hz±3Hz
Power consumption ····· 80 Watts(Max.)
Dimensions/Weight
Unit $\cdots 15 \times 14.3 \times 15.4 (inches(H \times W \times D)/28 lbs)$
(380×364×390mm/13kg) Carton
Carton $\cdots 17.5 \times 16.1 \times 17.2$ inches $(H \times W \times D)/33$ lbs
(445×408×437/15kg)
Design and specifications are subject to change without prior NOTICE.
NOTICE.

APPENDIX A

SIGNAL TIMING CHART



Mode	VGA 8	8514A		
	VGA 1	VGA 2	VGA 3	03147
Timing	640×350	640×400	640×480	1024×768
FH(KHz)	31.468	31.468	31.468	35.520
AµSec	31.778	31.778	31.778	28.150
B#Sec	3.813	3.813	3.813	3.920
C#Sec	1.589	1.589	1.589	1.250
D#Sec	26.058	26.058	26.058	22.800
E#Sec	0.318	0.318	0.318	0.180
FV(Hz)	70.080	70.080	59.940	86.960
O m Sec	14.268	14.268	16.683	11.500
P m Sec	0.064	0.064	0.064	0.113
Q m Sec	1.716	0.890	0.794	0.563
R m Sec	11.504	13.156	15.762	10.810
S m Sec	0.985	0.159	0.064	0.014
Clock Fre.	05.475	00.000	05 175	44.912
(MHz)	25. 175	28.322	25. 175	44.912
Polarity	Positive	Negative	Negative	Positive
H. Sync		Positive	Negative	Positive
V. Sync	Negative	rusitive	Negative	1 OSILIVE
Remark			-	Interlaced

SVGA	VESA		ULTRA VGA			
SVGA	VGA	SVGA	ULINA VGA			
800×600	640×480	800×600	800×600	1024×768	1024×768	
35. 156	37.860	37.879	48.077	48.363	56.476	
28.444	26.413	26.400	20.800	20.677	17.707	
2.000	1.270	3.200	2.400	2.092	1.813	
3.556	4.603	2 200	1.280	2.462	1.920	
22.222	20.317	20.000	16.000	15.754	13.653	
0.667	0.762	1.000	1.120	0.369	0.320	
56.250	72.809	60.317	72.180	60.000	70.609	
17.778	13.735	16.579	13.850	16.667	14.272	
0.057	0.079	0.106	0.125	0.124	0.016	
0.626	0.740	0.607	0.478	0.600	0.513	
17.067	12.678	15.840	12.480	15.880	13.599	
0.028	0.238	0.026	0.770	0.062	0.053	
36.00	31.500	40.000	50.024	65. 00	75.000	
Posi./Nega.	Posi./Nega.	Posi./Nega.	Posi./Nega.	Posi./Nega.	Nega.	
Posi./Nega.	Posi./Nega.	Posi./Nega.	Posi/Nega.	Posi./Nega.	Nega.	
	7					

POWER MANAGEMENT SYSTEM

This monitor is energy star compliant when used with a computer

equipped with DPMS.

If your computer system cannot support a display power management function. you may purchase a optional DPMS software program to have power saving function.

The following table shows the power saving modes.

Table: Display Power Management Signaling (DPMS)

State	Normal	Power Saving Function Mode			
Sync	Operation	Stand-by Mode	Suspend Mode	Power-off Mode	
Horizontal Active		No Pulse	Active	No Pulse	
Vertical	Active	Active	No Pulse	No Pulse	
Video	Active	Blanked	Blanked	Blanked	
Led color	Green	Green	Green Blinking	off	
Power	Max	Less than	Less than	Less than	
Consumption	80W	65W	12W	5W	

NOTE: This monitor automatically returns to normal operation state when horizontal and vertical sync returns.

CE Declaration of Conformity

Application of Council Directive

73/23/EEC

89/336/EEC

Standards to which Conformity

EN55022-1993 & EN50082-1-1992

is Declared Basic Standards and EN60555-2/3

Procedures

Manufacturer's Name

Shinho Tech Co., Ltd.

Manufacturer's Address

Factory 1: 46-2 Samkyoe-ri Pogok-myon

Yongin-kun, Kyungki-do, Korea

Factory 2: San 31-8, 84 Anpyung-ri

Hoybub-myon Ichun-kun,

Kyungki-do, Korea

Type of Product

Color Monitor

Model No.

SM584V or SM583B

SM483C or SM492C

Shinho Tech Co., Ltd. hereby declares that the product specified above conforms to the above Directive and Standards.

Dec. 20, 1995/Korea

Place and Date of Issue

Tae K Jung / Quality Control Manager

GERMAN RFI DECLARATION FOR CLASS B SELF CERTIFICATION

Hiermit wird bescheinigt, dass der SM584 Übereinstimmung mit den Bestimmungen der BMPT-Amtsblatt Vfg243/1991 funk-entstört ist.

Der Deutschen Bundespost wurde das Inverkehrbringen dieses Gerates angezeigt und die Berechtigung zur Überprufung der Serie auf Einhaltung der Bestimmungen eingeräumt.

Shin Ho Tech, Co., Ltd. 46-2 Samkyoe-Ri, Pogok-Myon, Yongin-Kun, Kyunggi-Do, 445-820, Korea

ENGLISH TRANSLATION:

We hereby certify that the SM584 complies with the RFI suppression requirements of BMPT-Amtsblatt Vfg243/1991. The German Postal Services was the notified that equipment is being marketed. The German Postal Service has the right to re-test the equipment and verify compliance.



